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2 DEVICE FOR SUSPENDING A RECORDER

3 AND METHOD FOR USING THE SAME

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5 BACKGROUND OF THE INVENTION

6 Field of the Invention.

7 This invention pertains to the general field of carrying a woodwind musical  
8 instrument known as a recorder.

9 Description of the Prior Art.

10 The recorder is an instrument that is of such size that it can be carried easily. This  
11 instrument is most often used by children in early grade school for instruction in music.  
12 Most often the child will purchase a recorder. The child will then carry the recorder to  
13 class and carry it in the hand during class. If the child needs to use the hands for another  
14 purpose, the recorder is laid down. As such, the recorder is subject to loss, contamination  
15 or confusion when play is to be continued. Also, like with anything a child is forced to  
16 carry in their hands, the recorder can be inappropriately used as a toy, weapon, or  
17 whatever fits the occasion.

18 Prior art is limited to some resourceful teachers that have simply tied a string around  
19 the recorder with some sort of loop that is placed around the child's neck to suspend the  
20 recorder. Because the knots may slip, come untied or can not be readily untied, this  
21 method has not gained wide support. In addition, after the teacher has tied all the knots  
22 required by the students, the teacher has little time left for instruction. Thus, at the present

time, there is no suitable means for the hand free carrying of the recorder. Also, this method has only been applied to recorders possessing a definite ridge along their shaft, and not merely to recorders with a tapered shaft.

#### Objectives.

It is therefore an objective of this invention to provide a device for conveniently carrying a recorder with an expanding circumference shaft, from a strap that is worn about the neck.

Another objective of the invention is the realization of the above mentioned objective with simple, reliable and inexpensive hardware.

### SUMMARY OF THE INVENTION

The invention provides a device for carrying a recorder and a method for using it.

The device comprises a ring attached to a strap. The user wears the strap around their neck, with the ring in the front.

The method of the invention is to pull apart the recorder at the juncture point, insert the upper section of the recorder through the ring, and slide the ring towards the mouth piece until it becomes lodged. It becomes lodged because the inner diameter of the ring is smaller than the diameter of the recorder at the mouthpiece. The recorder is then reconnected and released. The recorder thus becomes suspended from the neck of the user.

Using the device thus frees both hands of the user. This and other advantages of the present invention will be understood and more appreciated after a consideration of the following drawings and the detailed description of the invention.

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FIG. 2 is a perspective view of the device of the invention.

FIG. 3 is a perspective view of a recorder being suspended from the device of the invention.

Referring to the drawings, FIG. 1 illustrates the general configuration of the ring 1 before the strap is attached to it.

The ring 1 is made of durable material so as to be able to withstand the rigors and forces that would be anticipated, when the device is in use by elementary age school children. As illustrated in FIG. 1, the ring 1 has an outer surface 3, an inner surface 4 and a side surface 5. The ring also has a radial thickness, which is defined as the distance between the inner and the outer surface.

Referring to FIG. 2, the strap 2 is made of a material that is strong enough to hold the recorder, yet be comfortable when placed around the neck. Knot 6 is any knot that will neatly secure the ends of the strap 2.

FIG. 3 shows a recorder A supported by the device of the invention. The recorder A has a proximate end and a distal end. The mouth piece (otherwise known as mouthpiece) can be seen at the proximate end, since it has a larger diameter than the adjoining shaft. The recorder A defines a juncture point C between the two ends. The recorder A can be separated at juncture point C into two sections, lower section D and upper section B. The

1 mouthpiece is included in upper section B. The shape of the recorder is one of substantial  
2 circular symmetry around an axis. That is why relevant terms like diameter are used, even  
3 though the shape of the shaft might not be exactly circular at some points.

4 When FIG.s 1, 2 and 3 are viewed together, it becomes apparent from scaling  
5 considerations that the radial thickness of the ring is about  $1/4$  the diameter of the recorder  
6 at the point of the recorder where the ring is lodged.

7 The relationship of the inner surface 4 and the recorder is best seen in FIG. 3. The  
8 inner surface 4 of the ring is circular with a diameter larger than the diameter of the  
9 recorder A at the point of the juncture C. The diameter of the upper section increases  
10 gradually from the juncture point C to the air hole of the mouth piece. As the recorder  
11 diameter thus increases, at some point it becomes larger than the diameter of the inner  
12 surface 4. This will cause the ring, as it is being slid from juncture point C towards the  
13 mouthpiece, to become lodged at some point before reaching the mouthpiece.

14 The method of the invention is as follows: The strap is suspended from the neck of  
15 the user. The recorder A is pulled apart to separate the two sections. The upper section is  
16 selected. The end of the upper section that includes the juncture point C (and is opposite  
17 the proximate end) is inserted through the ring. Then the ring is slid up towards the  
18 mouthpiece. The ring will thus become lodged at some point before reaching the  
19 mouthpiece. Then the recorder is reconnected and released.

20 Alternately, if the inner diameter of the ring is large enough, the distal end of the  
21 recorder is inserted through the ring without pulling apart the recorder. Then the ring is  
22 slid up towards the mouthpiece until lodged, as said above.